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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,480	10/28/2004	Jeffrey W. Scott	SILA:057C1	8093

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O'KEEFE, EGAN & PETERMAN  
Building C, Suite 200  
1101 Capital of Texas Highway South  
Austin, TX 78746

EXAMINER
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SINGH, RAMNANDAN P

ART UNIT	PAPER NUMBER
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2646

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/629,480

Applicant(s)

SCOTT ET AL.

Examiner

Ramnandan Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>Oct. 27, 2005</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed on Oct. 11, 2005 have been considered but are moot in view of the new ground(s) of rejection.

### **2. Status of Claims**

Claim 2 is cancelled.

Claims 1, 3-9 are pending.

### ***Double Patenting***

3. The Terminal Disclaimer (TD) filed by Applicant on Oct. 11, 2005 has not been received. In absence of this TD, the double-patenting rejection stands.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "DSL circuitry that **may** be used" in line 14. The word "**may**" used here is indefinite. Hence claim 1 is indefinite. A similar thing holds for claim 6.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1, 3-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hershberger et al [US 5,654,984] in view of Mills [US 5,815,505].

Regarding claim 1, Hershberger et al teach circuitry for terminating a phone line connection, as shown in Fig. 2, comprising:

powered side circuitry (202) operable to communicate digitally with phone line side circuitry (201), the digital communication comprising a digital data stream;

the phone line side circuitry operable (201) to communicate digitally with the powered side circuitry (202), the digital communication between the powered side circuitry and the phone line side circuitry comprising a digital data stream transmitted through an isolation barrier (208) (i.e. data access arrangement (DAA)), the phone line side circuitry (201) configured to be located between the phone line (201) and the isolation barrier (208) [Fig. 2; col. 4, line 59 to col. 5, line 53]; and

encode and decode circuitry (wherein Figs. 8A and 8B illustrate an example of Manchester encoded sigma delta modulation) coupled to the digital data stream to generate an encoded digital signal for transmission and receipt across the isolation barrier (208) at least a portion of the encode and decode circuitry associated with sigma delta modulator (223) being within the phone line side circuitry (201) wherein a coding

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scheme is applied in conjunction with the sigma delta modulation technique, and a corresponding decoder is connected at node 1012 of Fig. 10 in the power side circuitry (202) across the isolation barrier to decode the received signal from the phone side circuitry. A similar thing holds for a transmit signal transmitted from the power side circuitry (202) to the phone line side circuitry (201) across the isolation barrier (208) [Figs. 2, 8A, 8B, 10; col. 3, lines 53-55; col. 7, line 48 to col. 8, line 32; col. 15, line 49 to col. 16, line 10].

Hershbarger et al do not teach expressly DSL circuitry to generate DSL information.

Mills teaches DSL (40) circuitry that may be used to generate ADSL ( a variant of DSL) information for transmission across the isolation barriers (206, 207, 212) [ Fig. 1, 3-4; col. 1, lines 7-14; col. 1, lines 55-58; col. 2, line 12 to col. 3, line 17; Fig. 1,col. 4, line 56, col. 5, line 15; col. 7, lines 27-61; col. 9, line 2 to col. 10, line 29; col. 11, lines 8-17; col. 12, lines 28-48; col. 13, line 27 to col. 14, line 32].

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Mills with Hershbarger et al in order to enable transmission of both (low-speed) audio and (high-speed ADSL) data over a telephone line so that a household resident may use telephone sets as well as data equipment including computers and printers.

Regarding claim 3, Hershberger et al teaches the isolation barrier (208), wherein the isolation barrier is comprised of one or more capacitors (203, 204, 205) [Fig. 2].

Regarding claims 4-5, Hershberger et al further teach the DAA circuitry wherein isolation barrier is comprised of a transformer and one or more capacitors [Figs. 1, 3; col. 2, lines 49-58; col. 5, lines 15-28; col. 7, lines 35-457].

Regarding claim 6, Mills further teaches the circuitry, wherein the phone line side circuitry further comprises phone line side DSL circuitry (i.e. DSL modem 40) that may be used for receiving the DSL information transmitted across the isolation barrier [Figs. 1, 3-4].

Regarding claim 7, Hershberger et al further teach the DAA circuitry wherein isolation barrier is comprised of a transformer [Fig. 1].

Regarding Claim 8, since Hershberger et al teach using transformer as an isolating element [Fig. 1], it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the transformer to power the phone line circuitry having the DSL modem of the combined system of Hershberger et al and Mills to accommodate DSL transmission subject to system, circuit and design constraints.

Claim 9 is essentially similar to claim 8 and is rejected for the reasons stated above.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hershberger et al and Mills as applied to claim 4 above, and further in view of Oprescu et al [US 5,509,126].

Regarding claim 5, Hershberger et al do not teach the transformer being a pulse transformer.

Oprescu et al teach the use of a pulse transformer in an isolation barrier (col. 11, lines 41-45).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Oprescu et al with Hershberger et al in order to reduce cost and improve performance [Oprescu et al; col. 11, lines 42-45].

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hjartarson et al [US 6,295,343 B1] teach an apparatus for combined voice line card and xDSL line card functions shown in Fig. 5, wherein system interface (64) may be a DAA and the xDSL modem (62) in the phone line side circuitry [Fig. 5; col. 5, line 45 to col. 6, line 6].

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramnandan Singh whose telephone number is (571) 272-7529. The examiner can normally be reached on M-TH (8:00-5:30).



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ramnandan Singh  
Examiner  
Art Unit 2646



**SINH TRAN**  
**SUPERVISORY PATENT EXAMINER**